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ABSTRACT

Experiences of a teacher using educational technology in the classroom are recounted. The teacher welcomed technology as it was being introduced over the two decades she spent first in the preschool and then in the middle-school special-education classroom, but she found adapting to technological advances slow going at first. Eventually she came to use technology in a number of instructional management tasks, including calculating grades, making lesson plans, communicating with parents, and modifying classroom work. Technology, through the camcorder, allows efficient and convenient student-parent-teacher conferences. Parents receive a tape of the student's recorded interview as an introduction to communication with the teacher. She also adopted technology for instruction, giving students the opportunity to complete assignments and express themselves. Teachers are advised to expect to spend time learning about new hardware and software and to be creative in their technology uses. They are also advised that students, who often understand some aspect of the technology better than the teacher does, can be valuable resources. Thirteen unnumbered attachments include examples of technology use for teachers, lessons plans, grade spreadsheets, modified assignments, student questions, and examples of student computer assisted products. (SLD)

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Technology and the Special Education Classroom

Presented by
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Hjetland

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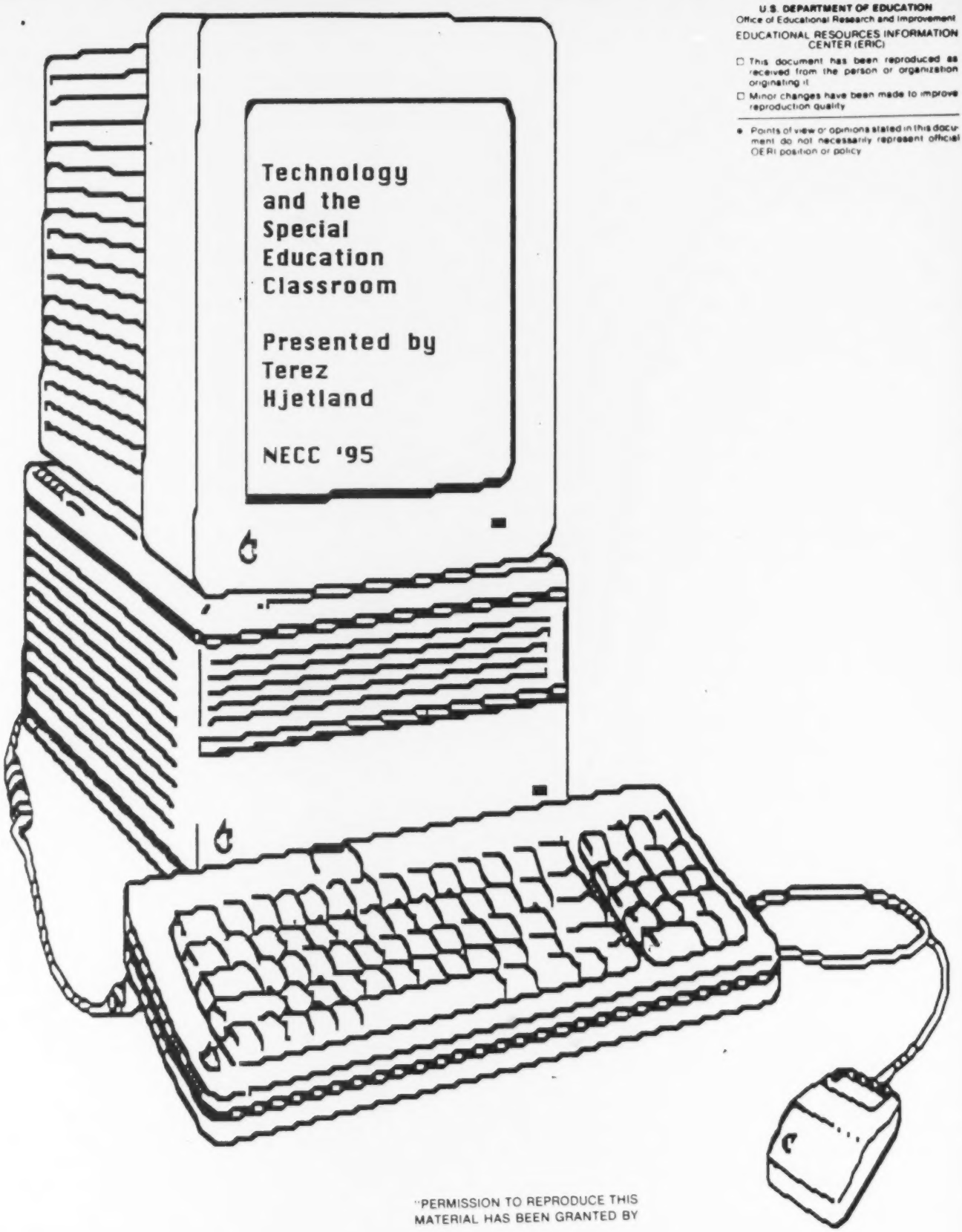

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Technology and the Special Education Classroom

Back in the mid seventies, when I started teaching, teachers had to learn to operate a few types of technology in the classroom. Basically, educators dealt with televisions, film strip projectors, film projectors and the dreaded purple monster (duplicating machine).

Life seemed simpler back then. But, was it really? The machines were fairly simple to operate and there weren't many of them to learn. I remember spending week nights and weekends with my lesson plan book writing, erasing and rewriting my weekly lessons. Many times I wrote the same parts such as, planning, lunch, gym, etc. every week. Many hours were spent at the end of the marking period slumped over my calculator and grade book figuring and checking the grades students earned.

Many of the machines I used are no longer in service. They have been replaced. VCRs took the place of film and filmstrip projectors. Xerox machines took the place of duplicating machines. In addition, we have seen the advent of new technology, such as computers, camcorders, printers, scanners, still digital cameras, etc. Over the two decades I have spent in the classroom I have seen the growth of technology use for teachers as well as students.

When the technology boom was first heard in the classroom, I was skeptical. Experts testified that our lives would be easier. The technology would do things for us faster and easier. We could actually have a life outside the classroom. I started dreaming of weekends spent with my family not with my pen and grade books. I couldn't wait to get my hands on the technology. At first I spent more time learning how to operate the hardware as well as the software. Then more time was spent figuring out how the technology could support learning. I began to think the experts had sold me down the river. My dreams of weekends with my family were going up in smoke. I was still doing things the old-fashioned way while I was learning the newfangled way. Eventually, the light at the end of the tunnel dawned. Everything started to fall into place.

Technology can make our lives easier. Everyday tasks are simplified. Figure 1 shows some examples of technology usage for teachers. I use computers mainly for grades, lesson plans, parent communication and modifying classroom work. Spreadsheets, word

processing, and drawing programs do the hard work for me. Figures 2-5 show examples of lesson plans and grade spreadsheets. Regular classroom assignments often need modification. I use a word processing program to accomplish this. Figure 6 shows an example of a modified assignment.

Through technology I have discovered a technique to aid parent/teacher conferences. Many of my parents cannot get to school at night. Thus, I spent many hours on the phone with parents during my planning and lunch times. Not any more. We use a camcorder to make a teacher/student/parent interview. The students write a set of questions, pick a partner and record an interview for their parents. See figure 7 for the list of questions a group of students wrote. After the students have recorded their section, I discuss behavior, grades, progress, etc. The tape is sent home a week before conferences. This has helped my conferences in three ways. First, students get input in the system. Many times students are close-mouthed and don't talk to their parents about school. This gives them a chance to communicate to their parents. Second, the tape give parents background information prior to conferences. They can spend the week developing questions and suggestion which can be discussed. Conferences no longer consists of the teacher doing all the talking. They are true discussions. Third, parents who cannot get into school (no car, no babysitter, work at night, etc.) are kept informed about their child's education. Two other benefits have been realized since I started using this format for parent/teacher communication. My life is made easier. My planning period is spent planning activities and I actually eat lunch during my lunch time. The students are proud to bring the tape home to their parent(s).

Technology use is not limited to teachers. Students enjoy using a variety of technology to complete assignments. Figure 9 shows examples of students' usage. In the past I have used a drawing program for the students to complete a sheet about themselves. This accomplishes two objectives. First, I get to know my new students. Second, they get to know the computers. (See figure 10) Then we move to HyperCard or HyperStudio to flesh out the facts about themselves. (See figure 11) Students have a lot of fun with this. Figure 12 shows how a student used a spreadsheet program to develop a chart and a graph. Quick take cameras are an excellent but expensive addition to the classroom. We take ours on field trips to

record the places and activities. (See figure 13).

Several tips can make your life easier when dealing with technology. First, be prepared to spend time learning new hardware and software. Second, be creative. Software and hardware can be used in many innovative ways. Third, make copies. Disks do crash. If the disks containing your grades crashes you won't worry if you have an up-to-date copy. Fourth, be prepared to ask your students how something works. Oftentimes they are more willing to explore technology and thus master it faster than we do. Fifth, don't worry. You'll get the hang of it.

I want to leave you with a true story. In January 1994 I was transferred from a preschool position to teaching eighth grade special education. I had my hands full learning about portfolios and the technology available at the middle school. Every night for two weeks I sat hunched over the computer trying to make it work. I started feeling confident and planned a classroom activity using the computers. Some of my students learned fast while others struggled. Peer tutoring became the norm in the classroom. Students enjoyed helping one another. One day a frustrated student became very vocal. He couldn't make the computer do what he wanted it to do and he was giving up. John (not his real name) went over to Tom (also not his real name) and tried to help him. Tom was adamant. He would never get the computer to work right and he wasn't going to try any longer. John tried to persuade him but to no avail. John yelled from across the room, "Hey, Mrs. H.!" I called back, "Yeah. What do you want John?" "I was just wandering," John said, "When did you learn how to do this program?" I looked at him and wandered what he was getting at. "I've been taking the power books home for the past two weeks," I said. John whispered something to Tom. "Did you know how to do this before you came to the middle school?" John asked. "No, I didn't," I replied, "In fact, I didn't even know this program existed. It took a lot of blood, sweat and tears for me to learn how to operate this program." John grinned at Tom and poked him in the arm. "See," said John, "If the old lady can do it, so can we." So you see, if this old lady can do it, so can you!

TECHNOLOGY USES

I. Teachers

Use	Software	Hardware
Grades	Spreadsheet	Computer
Lesson Plans	Drawing	Computer and Printer
Observations	Grady Profile Learner Profile VHS Tape	Newton Newton Cam Corder
Parent Contacts	Word Processor Spreadsheet	Computer Computer
Conferences	VHS Tape	Cam Corder
Class Work	Word Processor	Computer

Date	Lesson Plans	Teacher:	

Date
Feb. 13
Feb. 17

Lesson Plans Teacher: Ms. Hjetland

Collaboration 8:15 - 10:11	Special Education Resource Room 11:15 - 12:05	Special Education Resource Room 12:35 - 2:30
Mon, Wed, Fri: Period 1: in Mr Brown's room for science.	**Mon & Wed:** 1. SLP from MSU conduct speech therapy with class.	**Monday:** 1. Outline sect. 1 of chapter 10 social studies.
Period 2: in Ms. Schempp's class for math. **Tues, Thurs:** Period 1: in Mr. Greenwell's class for social studies.	**Tues, Thurs, & Fri:** 1. Timed math test. a. Multiplication b. M,T,W - time is two minute c. Th, F - time is 1 and a half mintues. 2. Read a story from :	2. 1:00 - 1:30 Ken Bailey will talk to the class as a whole on appropriate and inappropriate behavior. **Tues.:** * ACOT Reward Day. **Wed.,Thurs. Fri:**
Period 2: in Ms. Armstrong's class for language arts. **KERA GOALS:** 1. 1.2 2. 1.11 3. 2.5 4. 2.18	Escape Cars & Cycles Mysteries of Science World of Sports Entertainers Answer questions on the back of the reading card. Using the answer keys. students correct their answers.	1. Answer questions at the end section in social studies. 2. Outline section 2 of Chapter 10 in social studies. 3. Answer questions at the end section 2 in social studies. 4. Continue working on math portfolio entry. 5. Work on rap song and play fc fifth grade orientation project.
	3. Write words on spelling list 5 times each. Spelling test on Friday. 4. Write in journal. Minimum of five sentences. **KERA GOALS:** 1. 1.2 2. 1.11 3. 2.7	**KERA GOALS:** 1. 1.3 2. 1.4 3. 1.11

SPED MARKING PERIOD 3 GRADES

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
				Know It All	Spelling Test 1-13	Spelling Test 1-20	Spelling Test 1-27	It's A Snap	A Mission	Spelling Test 2-3	Gearing Up!	What A Recipe!	Spelling Test 2-10	Spelling Test 2-17	Best Crop Ever
1	LANGUAGE ARTS														
2															
3	Last Name	First Name	6	93	100	98	100	100	100	98	85	100	95	85	99
4			6	43	100	95	95	100	100	98	93	100	100	100	100
5			6	67	83	85	95	94	65	95	59	100	100	67	100
6			6	72	71	95	98	100	100	95	78	97	93		91
7			6	98	60	95	95	100	81	100	78	90	98	85	82
8			6	93	75	93	93	100	97	95	78	100	98	98	85
9			6	93	86	90	93	74	77	100	93	97	100	87	
10			6	100	100	95	98	100	100	100	93	100	100	100	100
11			6	67	0	95	100	100	100	100	70	100	100	94	
12			6	93	100	95	100	91	100	100	74	84	100	92	
13			6	89	58	58	63	100	94	65	78	90	63	35	82
14			6	100	88	88	88	91	97	98	90	97	100	75	92
15			6	100	100	98	98	100	97	100	93	100	100		100
16			6	98	86	98	98	94	100	100	85	100	100	83	83
17															
18	ClarisWorks														
19															
20															
21		Total Points							=Sum(D2..T3)						
22															
23		Grade Averages							=Sum(Ds..T3)/$U$2*100						
24															
25															
26		Average + Bonus Points							=Sum(D3..T3)$U$2*100+W3						
27															
28		Letter Grades							VLOOKUP(X3,$Z$4..$AA$17,1)						
29															
30															
31	Microsoft Works														
32															
33															
34		Total Points							=Sum(D2:T3)						
35															
36		Grade Averages							=Sum(Ds:T3)/$U$2*100						
37															
38															
39		Average + Bonus Points							=Sum(D3.:T3)$U$2*100+W3						
40															
41		Letter Grades							VLOOKUP(X3,$Z$4:$AA$17,1)						
42															
43															

SPED MARKING PERIOD 3 GRADES

	P	Q	R	S	T	U	V	W	X
	Total Points	Grade Average	Bonus Points	Average	Letter Grade				
1									
2		1000				GRADE INDEX			
3	969	96.9		96.9	A				
4	924	92.4		92.4	A -	0	F		
5	782	78.2		78.2	C+	60	D-		
6	844	84.4		84.4	B	64	D		
7	895	89.5		89.5	B+	68	D+		
8	922	92.2		92.2	A -	70	C-		
9	903	90.3		90.3	A -	74	C		
10	986	98.6		98.6	A +	78	C+		
11	832	83.2		83.2	B -	80	B-		
12	937	93.7		93.7	A -	84	B		
13	283	28.3		28.3	F	88	B+		
14	758	75.8		75.8	C	90	A -		
15	937	93.7		93.7	A -	94	A		
16	986	98.6		98.6	A +	98	A+		
17	959	95.9		95.9	A	100	A+		
18									
	Total Points	Grade Average	Bonus Points	Average	Letter Grade				
19									
20		600							
21	547	91.2		91.2	A -				
22	531	88.5		88.5	B+				
23	504	84.0		84.0	B				
24	442	73.7		73.7	C-				
25	546	91.0		91.0	A -				
26	565	94.2		94.2	A				
27	431	71.8		71.8	C-				
28	534	89.0		89.0	B+				
29	539	89.8		89.8	B+				
30	559	93.2		93.2	A -				
31	426	71.0		71.0	C-				
32	523	87.2		87.2	B				
33	449	74.8		74.8	C				
34	591	98.5		98.5	A+				
35	463	77.2		77.2	C				
36									
37									
38									
39									
40									
41									
42									

Name: _____ Date: _____

Group: _____

DEFINITIONS:

1. Atom: _____

_____

2. Molecule: _____

_____

3. Nucleus: _____

_____

4. Electron: _____

_____

MULTIPLE CHOICE:

1. The small, heavy center of an atom is the
   a. electron cloud b. nucleus

2. Particles smaller than the atom are
   a. subatomic particles b. elements

3. The nucleus of an atom contains
   a. protons and neutrons b. protons, neutrons, and electrons

4. The number of protons in an atom is called its
   a. mass number b. atomic number

5. Two or more atoms chemically bonded together form a
   a. nucleus b. molecule

INTERVIEW QUESTIONS

1. What do you like about school?

2. What do you dislike about school?

3. What is your favorite class? Why?

4. Thinking of your role as a student, what is your strong point? What do you do that makes you a good student?

5. Thinking of your role as a student, what is your weak point? What do you do that makes you a weak student?

6. In the next couple of weeks what are you going to do to make yourself a stronger student?

7. Is there anything you would like to tell your parents about how you are doing in school?

PARENT CONTACTS

Parent:
Student:
Date:
RE:

Parent:
Student:
Date:
RE:

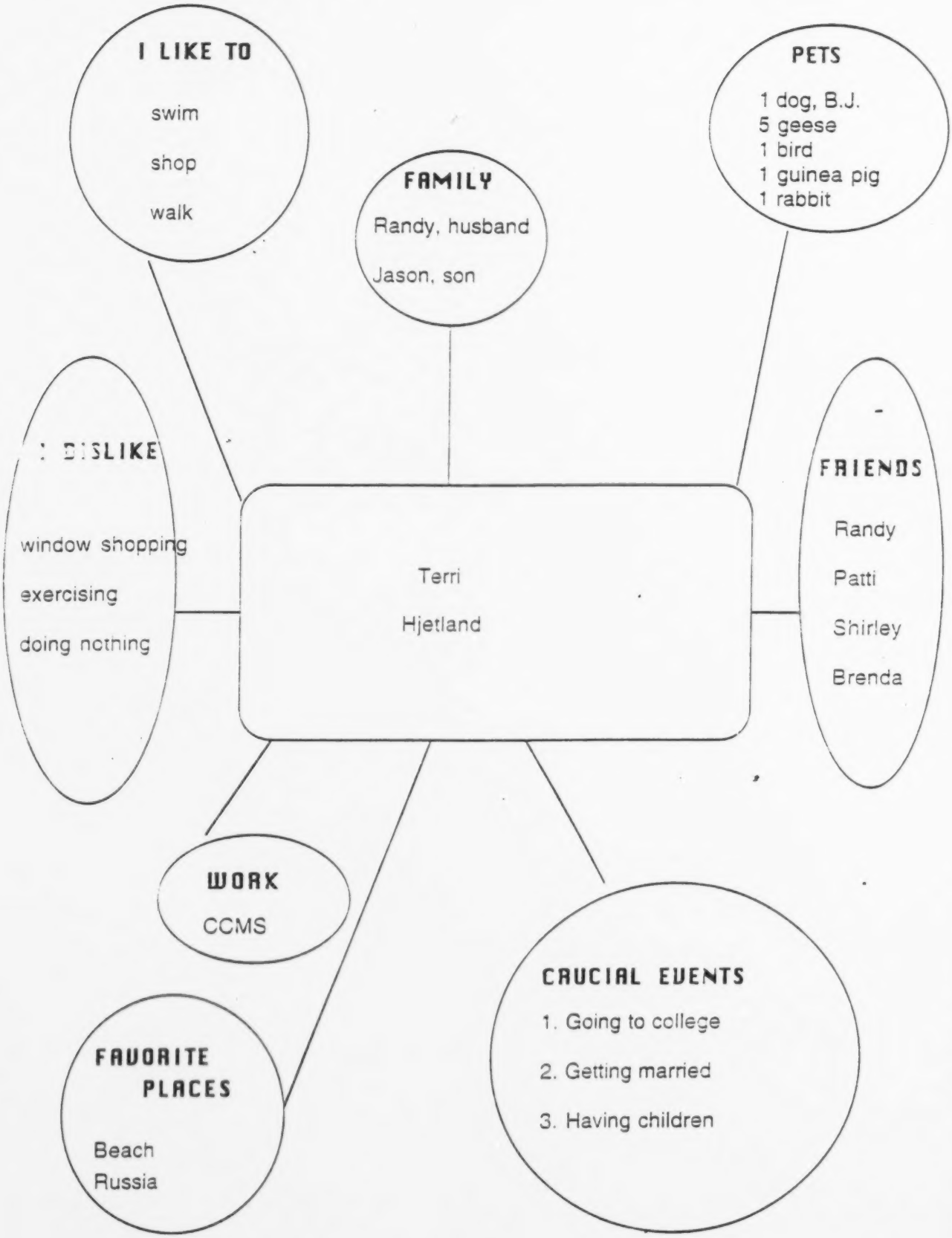
Parent:
Student:
Date:
RE:

Parent:
Student:
Date:
RE:

TECHNOLOGY USES

II. Students

Use	Software	Hardware
Writing	Word Processor	Computer
Charts	Spreadsheet	Computer
Graphs	Spreadsheet Drawing	Computer Computer
Interviews	VHS Tape	Cam Corder
Research	CD-Roms	CD-Rom Player and Computer
Photographs	Quicktake Darkroom One Scanner	Quicktake Camera Photographic Camera Scanner
Movies	Quick Take Adobe Premeire Diva VHS Tape	Computer Adobe Card and Computer Radius Card and Computer Cam Corder and Cables.



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FAMILY

FRIENDS

I LIKE

DISLIKES

PETS

FAV. PLACES

CRUCIAL EVENTS

ANYTHING ELSE

My best friend happens to be my husband, Randy. I have known him for a long time. I met him in 1973. My other friends include Patti, Shirley and Brenda. They are people I have met since I started teaching in Calloway Co. They have been through a lot with me. I know I can count on them to guide me

FAMILY

FRIENDS

I LIKE

DISLIKES

PETS

FAV. PLACES

CRUCIAL EVENTS

ANYTHING ELSE

There are many things I like to do. Among them are swimming, shopping and walking. I only like to shop when I have money. When I have time I also like to listen to music, read and do crafts. My favorite recording artist is Reba McIntyre. When I read for pleasure I usually read historical romance stories. The crafts I enjoy include needlepoint, crocheting and embroidery.

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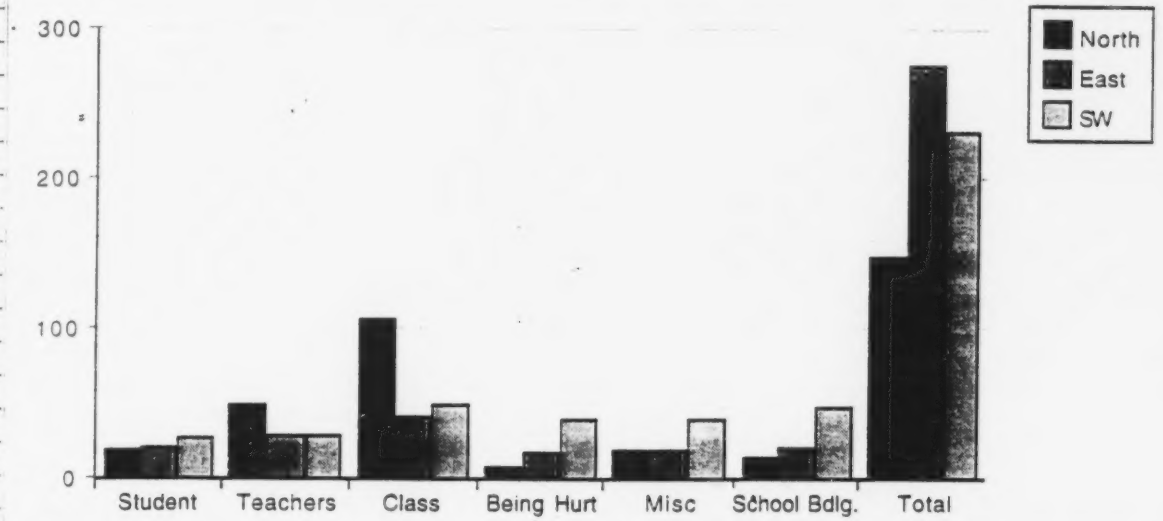
WANT TO KNOW

	A	B	C	D	E	F	G	H
1		Student	Teachers	Class	Being Hurt	Misc	School Bdlg.	Total
2	North	19	50	106	8	19	15	148
3	East	21	29	42	17	19	20	276
4	SW	27	29	49	39	40	47	231



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Students looking around
shoreline for trash

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